FIG.1

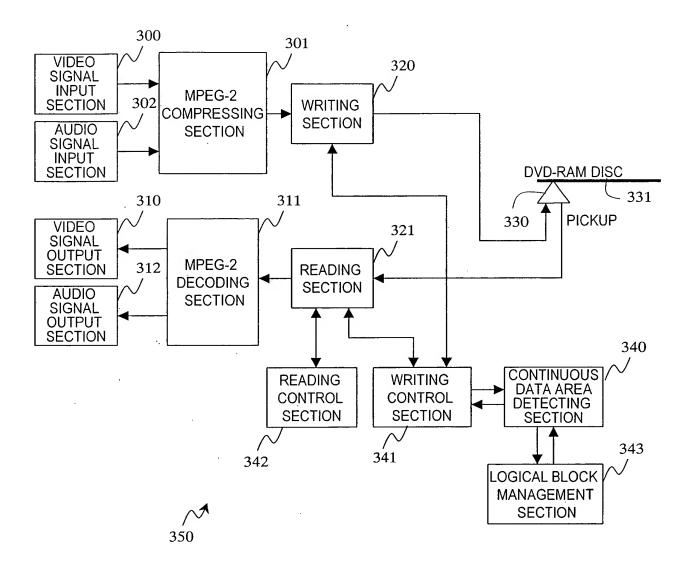
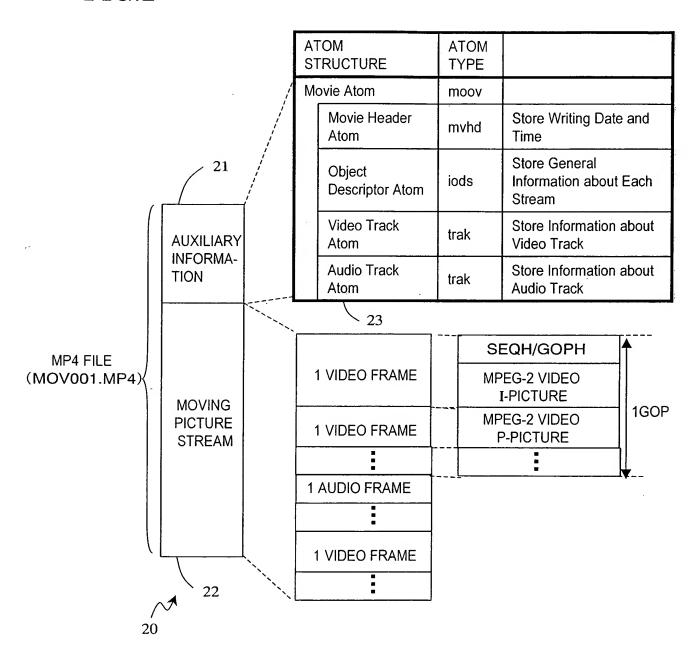


FIG.2



	TOM TRUCTURE	ATOM TYPE
M	lovie Atom	moov
	Movie Header Atom	mvhd
	Object Descriptor Atom	iods
	Video Track Atom	trak
	Audio Track Atom	trak

		ATOM S	STRU	CTURE	ATOM TYPE	
V	'IDE	O TRAC	< ATC	M	trak	(Declaration of Track Atom)
	Ti	rack Head	ler At	om	tkhd	Store Track ID -
	E	dit List Ate	om		edts	(Declaration of Edit List Atom)
		Ed	it List	Atom	elst	Specify Playback Range and Timings
	М	edia Aton	n		mdia	(Declaration of Media Atom)
		Media H	leade	er Atom	mdhd	Specify Time Information Unit
		Handler	Refe	rence Atom	hdlr	Store Information Showing Identity as Video Track
ì		Media I	nform	ation Atom	minf	(Declaration of Media Information Atom)
	-			eol Media ider Atom	nmhd	Show Identity as Video Data
			Dat Ato	a Information m	dinf	(Declaration of Data Information Atom)
				Data Reference Atom	dref	Store Its File Name If Moving Picture Stream is Separate File
		Sample	Table	e Atom	stbl	(Declaration of Sample Table Atom)
			Dec to S	oding Time ample Atom	stts	Store Decoding Time of Each Video Frame
			Con Tim Ato	nposition e to Sample n	ctts	Store Presentation Time of Each Video Frame
			San Des	nple cription Atom	stsd	Store Information Showing Identity of Video Track as MPEG-2 Video and Store Audio Track Attribute
			San Ator	nple Size n	stsz	Store Data Size of Each Video Frame
		fe.	San Ator	nple to Chunk	stsc	Store the Number of Video Frames to Make One Chunk
			Chu Ator	nk Offset n	stco	Store Top Address of Chunk

FIG.4

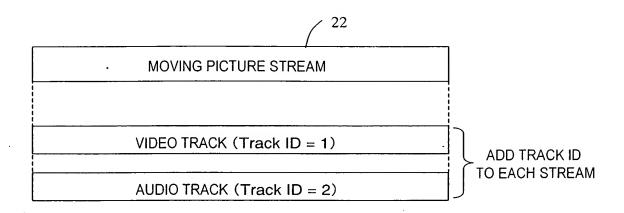
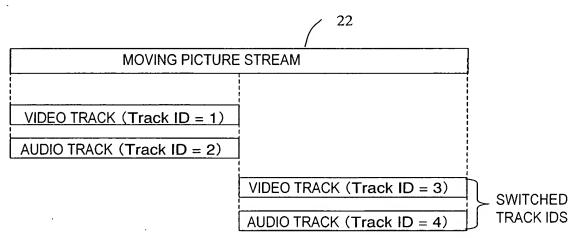


FIG.5



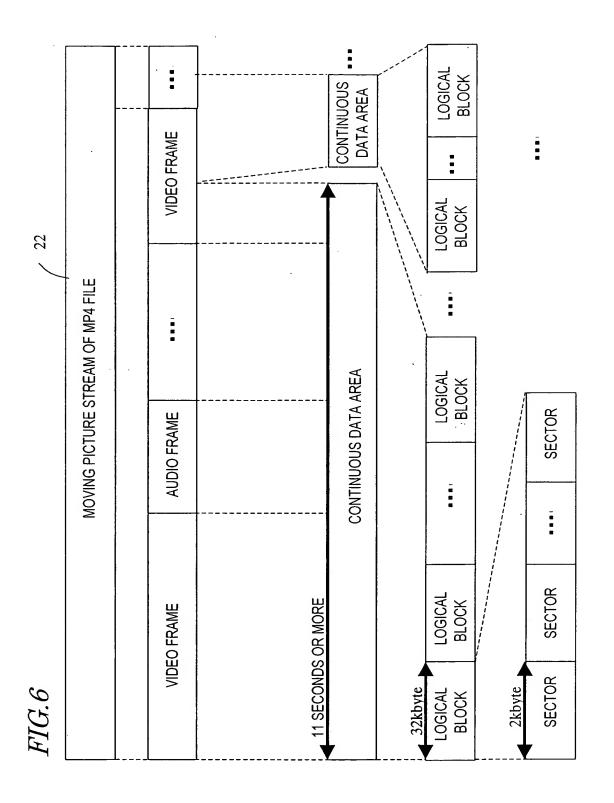
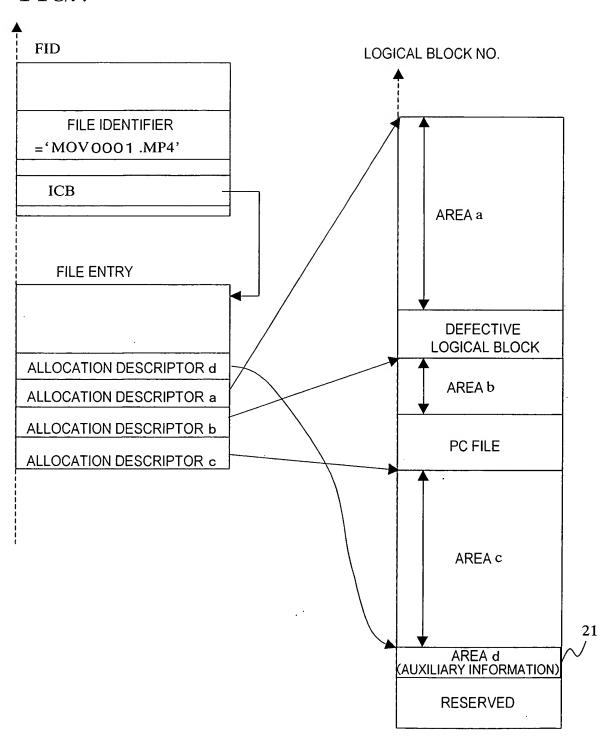


FIG.7



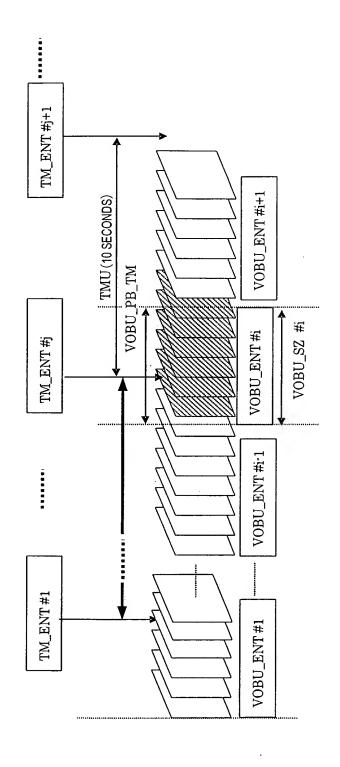
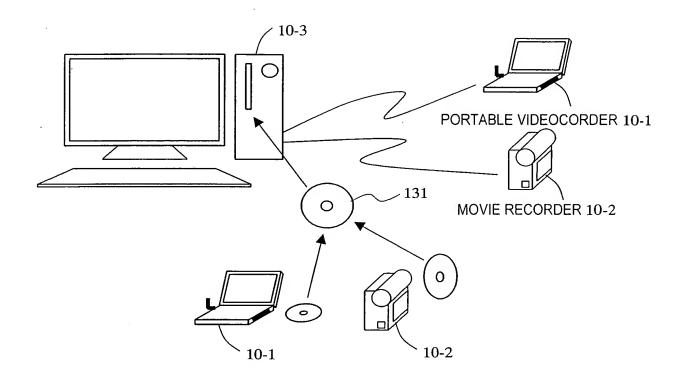


FIG.9

,		FIELD NAME	SETTING
Time Ma	Time Map General Infomation	TMAP_GI	
	No. of Time Entries	TM_ENT_Ns	Total Number of Time Entries
	No. of VOBU Entries	VOBU_ENT_Ns	Total Number of VOBUs
	Time Offset	TM_OFS	Number of Video Fields
	Address Offset	ADR_OFS	Number of LBNs (F_RLBN)
Time Entry	ry	TM_ENT	
_	VOBU Entry Number	VOBU_ENTN	VOBU Entry No
	Time Difference	TM_DIFF	Number of Video Fields
	Target VOBU address	NOBU_ADR	Number of LBNs (F_RLBN)
VOBU Entry	ıtry	VOBU_ENT	
	1st Reference Picture	1STREF_SZ	Number of Packs
	VOBU_PB_TM	VOBU_PB_TM	Number of Video Fields
	VOBU_SZ	VOBU_SZ	Number of Packs

FIG.10



*FIG.11* 

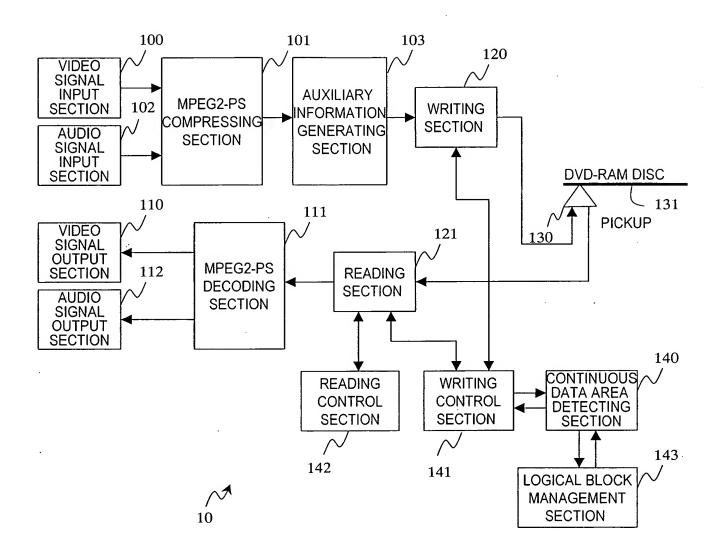


FIG.12

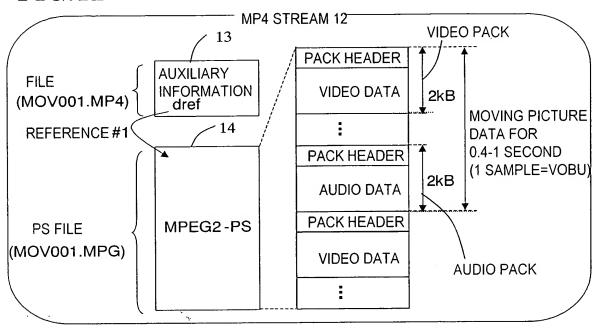


FIG.13

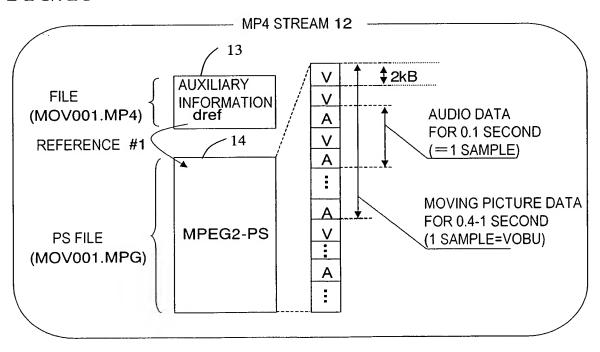


FIG. 14

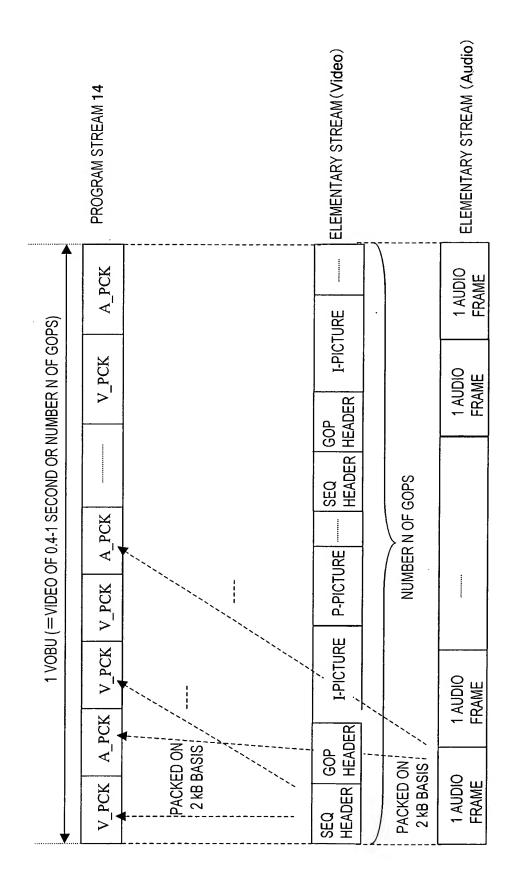
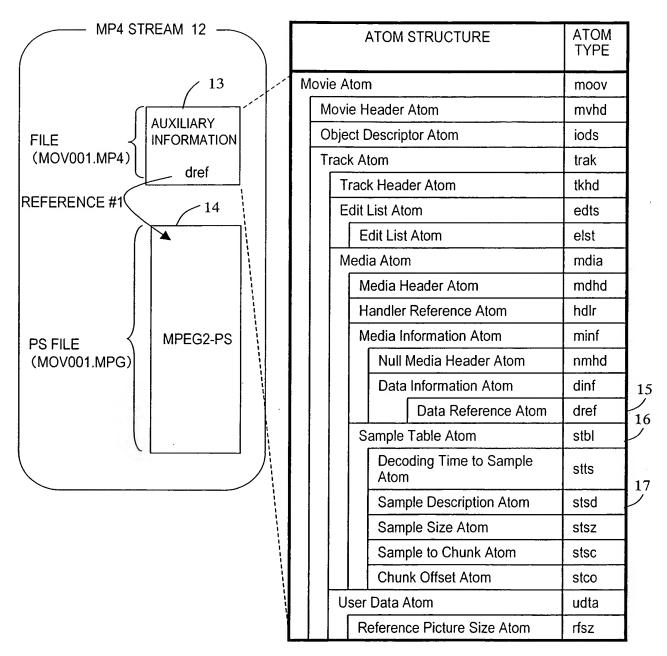


FIG.15



	AT	OM STRUCTURE	ATOM TYPE	
Movie	e Atom		moov	(Declaration of Movie Atom)
M	ovie He	eader Atom	mvhd	Store Writing Date and Time
01	bject D	escriptor Atom	iods	Store General Information about Each Stream
Tr	ack Ato	om	trak	(Declaration of Track Atom)
	Track	Header Atom	tkhd	Store Track ID
	Edit L	ist Atom _	edts	(Declaration of Edit List Atom)
	Ed	dit List Atom	elst	Specify Playback Range and Timings
	Media	a Atom	mdia	(Declaration of Media Atom)
	Me	edia Header Atom	mdhd	Specify Time Information Unit
	На	andler Reference Atom	hdlr	Store Handler_type="m2ps" Showing Identity as MPEG2-PS
	М	edia Information Atom	minf	(Declaration of Media Information Atom)
		Null Media Header Atom	nmhd	Show Identity as Neither Video Frame nor Audio Frame
		Data Information Atom	dinf	(Declaration of Data Information Atom)
		Data Reference Atom	dref	Store Moving Picture Stream File in URL Form
	Sa	ample Table Atom	stbl	(Declaration of Sample Table Atom)
		Decoding Time to Sample Atom	stts	Store Playback Duration of Each VOBU
		Sample Description Atom	stsd	Show Specifications of MPEG2-PS
		Sample Size Atom	stsz	Store Size of Each VOBU
		Sample to Chunk Atom	stsc	Store the Number of VOBUs to Make One Chunk When Overall MPEG File is Treated as One Chunk
		Chunk Offset Atom	stco	Store Chunk Offset=0 as MPEG2-PS Starts from Beginning of MPEG File
	User I	Data Atom	udta	(Declaration of User Data Atom)
	Re	eference Picture Size Atom	rfsz	Store End Location of Top I-Frame of Each VOBU as Offset Value from Top of VOBU

FIG.17

#### Data Reference Atom 15

field	value			
size	33			DataEntryUrlAtom
type	'dref'	ĺ		DataEntryOnAtom
	4.01		field	value
entry_count	1		size	21
DataEntryUrlAtom				
			type	'url '
			location	'./MOV0001.MPG'

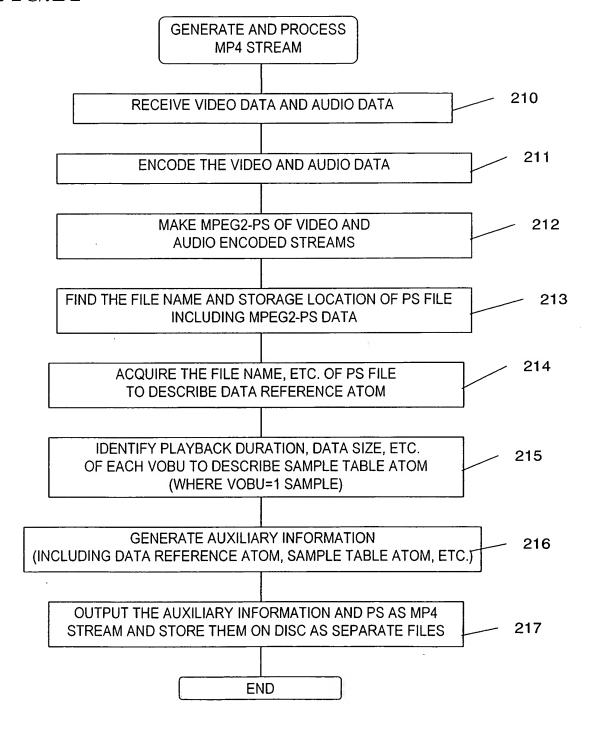
ATC	ATOM TYPE		FIELD NAME	REPEAT- ABLE?	DATA SIZE [UNIT]	DESCRIPTION	SETTING	
San	Sample Table Atom	stbl			-			
	:		entry- count		4[Byte]	Number of Entries		-
	Decoding Time to	stts	sample-count	0	4Byte]	Number of Samples		
,	מווסוע פולווופס		sample delta	0	4[Byte]	Sample time scale	VOBU_ENT	WT_BA_UBOV
	Sample Description Atom	m2av (NEW)						
			sample-size		4[Byte]	Default Sample Data Size		
	Sample Size Atom	stsz	sample count		4[Byte]	Number of Samples	VOBU_ENT	VOBU_ENT_Ns
			entry-size		4[Byte]	Sample Data Size	VOBU_ENT	VOBU_SZ
			entry-count		4[Byte]	Number of Entries	1 Entry	
	Sample to Chunk		first-chunk	0	4[Byte]	Chunk Index Number		
	Atom	SISC	samples-per-chunk	0	4[Byte]	Number of Samples	VOBU_ENT	VOBU_ENT_NS
			sample-description- index	0	4[Byte]	Sample description Index Number		
	Jane Officet		entry-count		4[Byte]	Number of Entries	1 Entry	
	Atom Atom	stco	chunk-offset		4[Byte]	Chunk Offset	TMAP_GI	ADR_OFS
In User		- tez	entry-count		4[Byte]	Number of Entries		
Data Atom	Size Atom	(NEW)	sync-sample-size	0	4[Byte]	Sync Sample Data Size	VOBU_ENT	1STREF_SZ

FIC 10			sample_description_entry 18	itry 18			
710.17			field	value			
Sample Description Atom	Atom 17		size		Video ES	Video ES Attributes	•
field	value		data-format	'p2sm'	field	value	
size	-		version	T	 ES Type	MPEG-2 video	0
type	'stsd'		data-refenrece-index	T	 width	720	
version	<b>←</b>		Writing Start Date and Time	May 05, 2001,	 height	480	-
number_of_entry	1		Presentation Start Time	05.23.00	 •••		
sample_ description_entry			Presentation End Time				
			Aspect Information	4:3	 Audio Es	Audio ES Attributes	
Seamless Information	nation		Video ES Attributes	·	 field	value	Ė
field			Audio ES Attributes		ES Type	AC-3	Γ
Audio Discontinuity	Ĺ	7	Discontinuity Point Start Flag	0	 channel		
Information		-	Seamless Information		 count		
SCR Discontinuity Information	mation	/			 sample_size		
					 •••		
					 sample_rate	,	

FIG.20 sample\_description\_entry 18

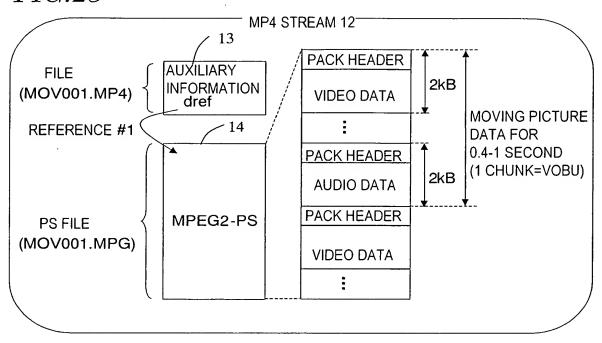
	,	
field	value	Complement
size		Store Data Size of sample_description_entry
data-format	ʻp2sm'	Information Showing Identity as
version	1	Version Number of Specifications
data-refenrece-index	1	Store ID Referenced by chunk offset atom
Writing Start Date and Time	May 05, 2001, 09:23:00	Store Writing Start Date and Time
Presentation Start Time		Store Timing Information about First Video Frame
Presentation End Time		Store Timing Information about Last Video Frame
Aspect Information	4:3	Store Aspect Information
Video ES Attributes		Store Information about Video Stream
Audio ES Attributes		Store Information about Audio Stream
Discontinuity Point Start Flag	0	Indicate That Previous and Current Moving Picture Streams are Completely Continuous Program Stream
Seamless Information		Store Information about Seamless Playback If Previous and Current Moving Picture Streams are Discontinuous
240		

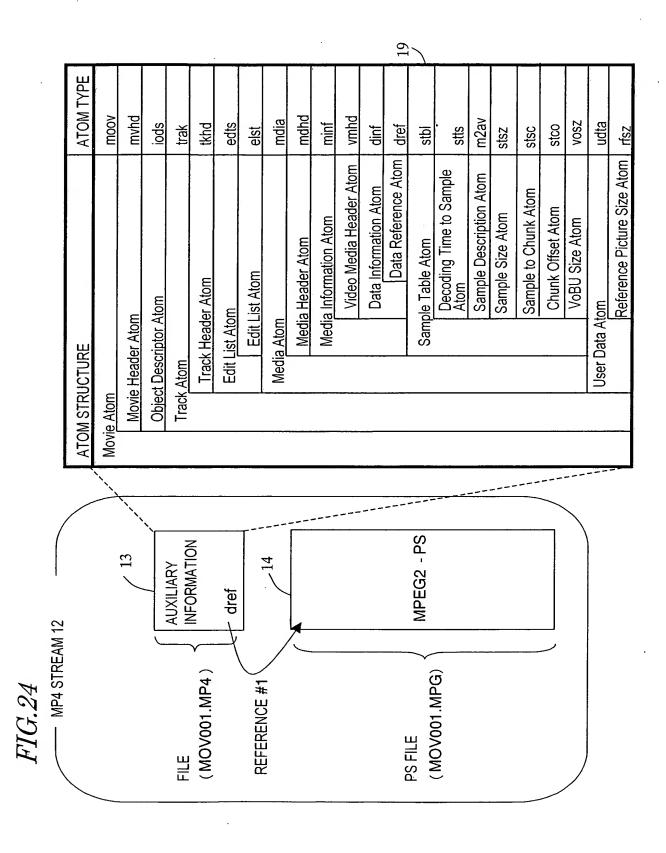
FIG.21



		MPEG2	MPEG2 Video (ES)	MPEG2-PS	2-PS
		М/0	CONVENTIONAL EXAMPLE	THE PRESENT INVENTION (1)	THE PRESENT INVENTION (2)
STRUC- TURAL	sample	M	video frame	ЛОВО	Video Frame with Pack Header
CONCERT	chunk	M	GOP	Overall Series of VOBUs (or VOB)	VOBU
	sync-sample	0	GOP with SEQ	ŀ	
ATOMS TO MAKE	Decoding Time to Sample Atom	М	video frame Period	VOBU Playback Duration	video frame Period (Fixed)
OF SAMPLE TABLE	Sample Size Atom	M	video frame size	VOBU Size	— (Not Used)
ATOM	Sample Description Atom	M	Stream Information	Stream Information	Stream Information
	Sample to Chunk Atom	М	Playback Duration of Each Chunk	Total Number of VOBUs (for One Entry)	Playback Duration of Each VOBU
	Chunk Offset Atom	M	Top Address of Each Chunk	Top Address of VOBU (for One Entry)	— (Not Used)
	VOBU Size Atom (NEW)	1	I		VOBU Size
IN USER DATA ATOM	Reference Picture Size Atom (NEW)	ı	I	I-frame size	I-frame size

FIG.23





7IG.25

ATOM TYPE		FIELD NAME	REPEAT ABLE?	DATA SIZE [UNIT]	REPEAT DATA SIZE DESCRIPTION ABLE? [UNIT]	SETTING	
Sample Table Atom	stbl						
Decodina		entry-count		4Bytel	Number of Entries	1 Entry	
Time to	stts	sample-count	0	4Byte	Number of Samples	Total Number of Video Frames	f Video Frames
Atom		sample delta	0	4[Byte]	Sample time scale	100/3001 sec	
Sample Description Atom	m2av (NEW)						
, O	1040	sample-size		4[Byte]	Default Sample Data Size		
Size Atom	3615	sample count		4/Byte]	Number of Samples	Not Used	
		entry-size	0	4[Byte]	Sample Data Size		
		entry-count		4[Byte]	Number of Entries	TMAP_GI	VOBU_ENT_Ns
0 0		first-chunk	0	4[Byte]	Chunk Index Number		
Sample to Chunk Atom	stsc	samples-per-chunk	0	4[Byte]	Number of Samples	VOBU_ENT	VOBU_PB_TM
		sample-description- index	0	4[Byte]	Sample Description Index Number		
Chunk	9	entry-count		4/Byte]	Number of Entries		
Offset Atom	SICO	chunk-offset		4[Byte]	Chunk Offset	Not Used	
VoBU Size Atom	vosz (NEW)	VOBU-size	0	4[Byte]	VOBU Data Size	VOBU_ENT	VOBU_SZ
Reference Picture Size Atom	rfsz (NEW)		0	4[Byte]	End Address of First I-Picture in VOBU	VOBU_ENT	1STREF_SZ

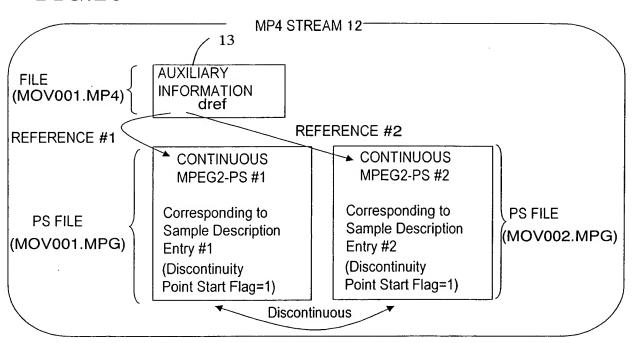
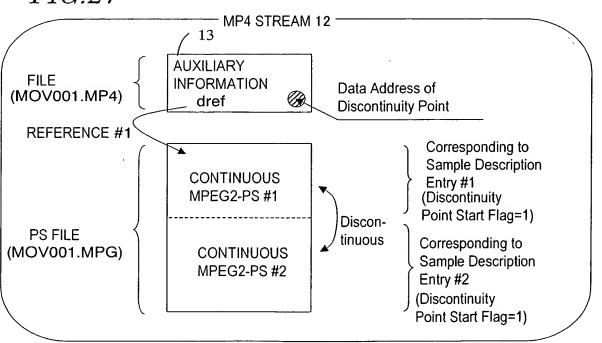
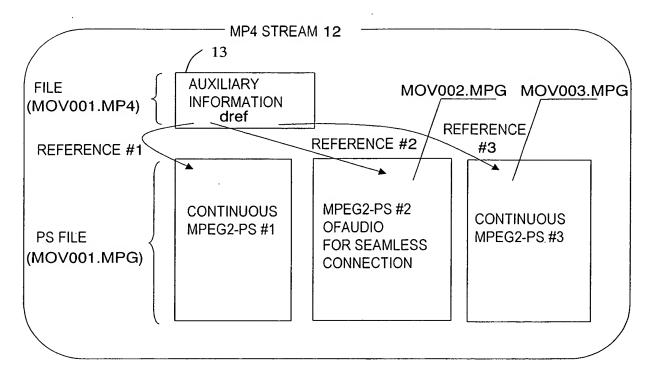
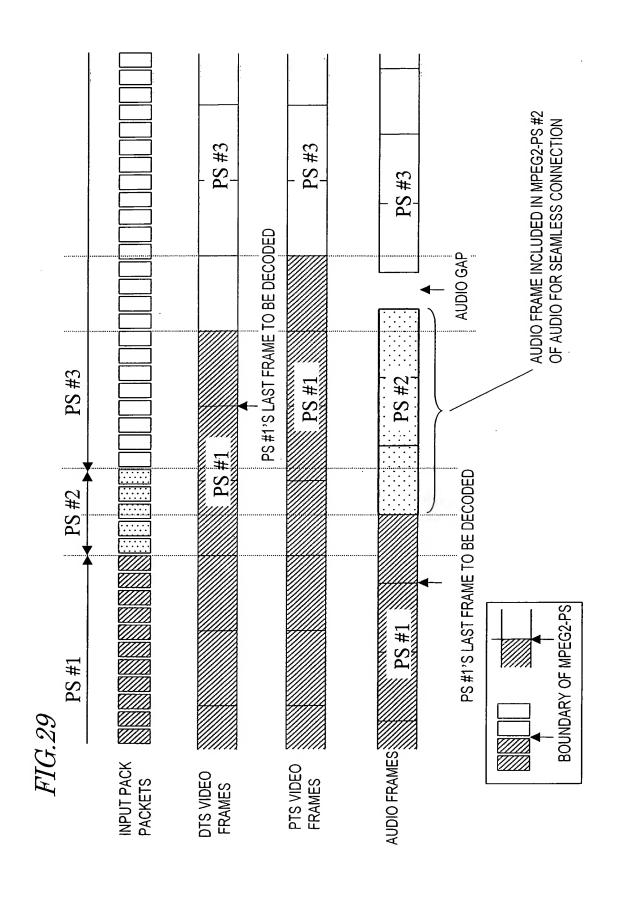


FIG.27



*FIG.28* 





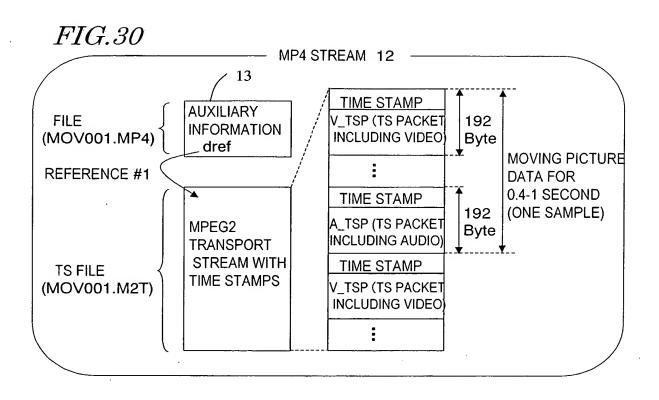
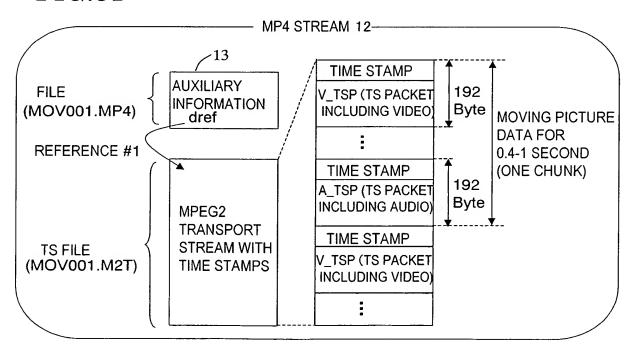
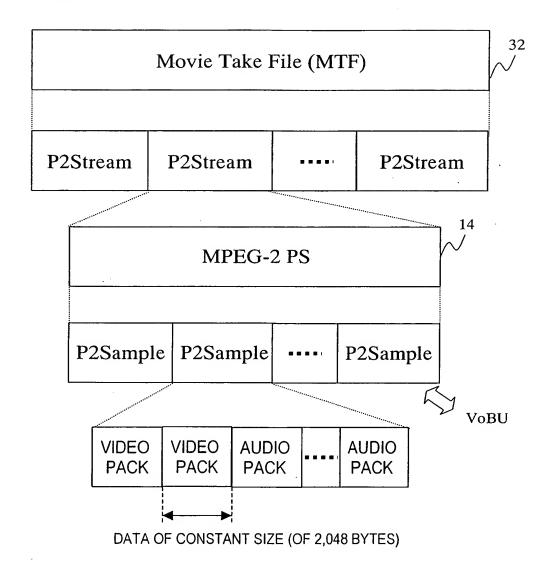
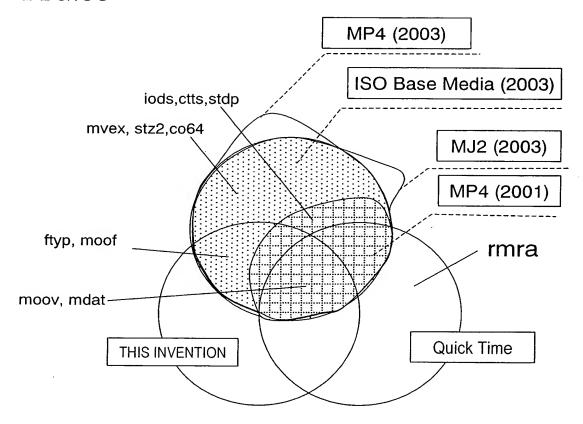


FIG.31

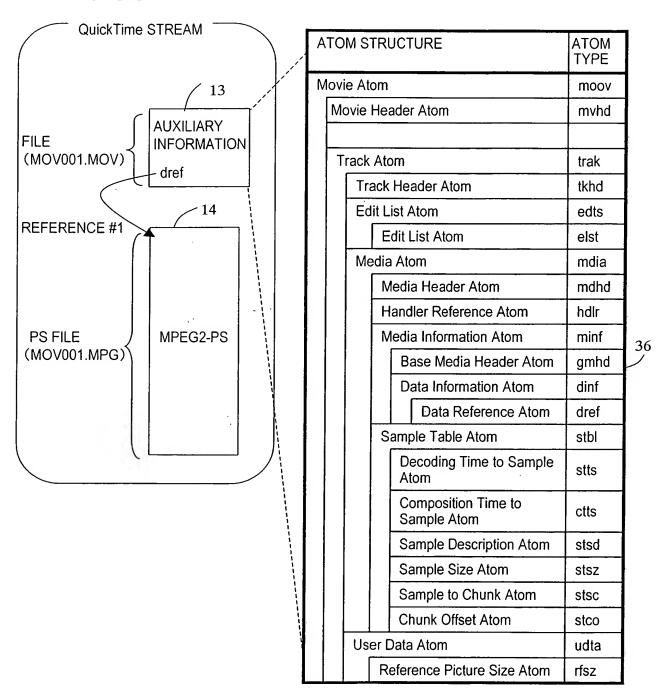




*FIG.33* 



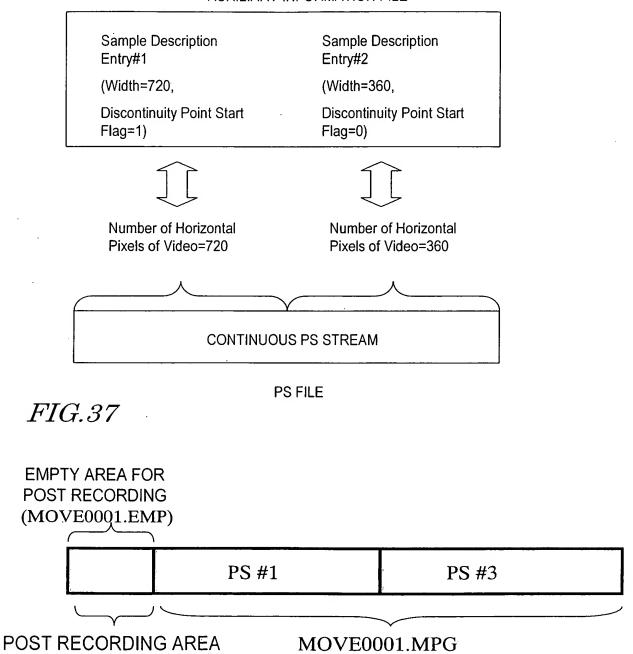
*FIG.34* 

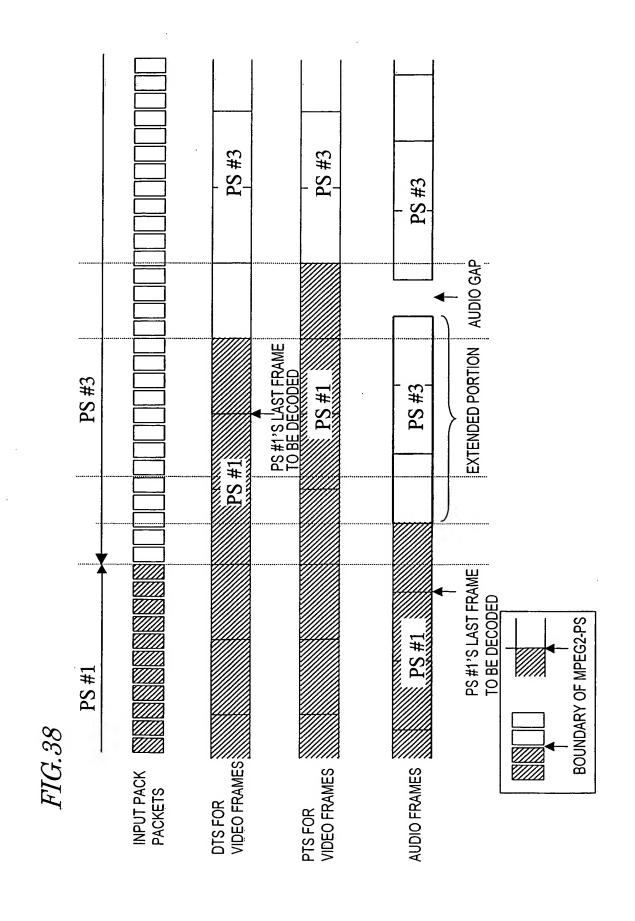


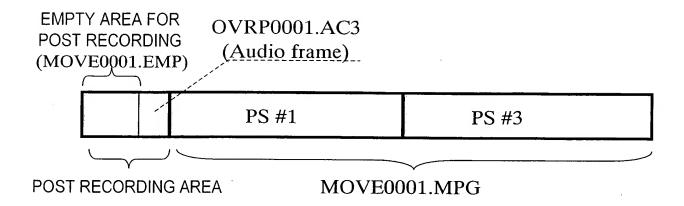
MOTA	1 STR	UCTURE	ATOM TYPE	
<i>N</i> ovie	Atom	1	moov	(Declaration of Movie Atom)
Mo	vie H	eader Atom	mvhd	Store Writing Date and Time
	·			
Tra	ack At	om	trak	(Declaration of Track Atom)
	Trac	k Header Atom	tkhd	Store Track ID
	Edit	List Atom	edts	(Declaration of Edit List Atom)
	E	dit List Atom	elst	Specify Playback Range and Timings
	Med	ia Atom	mdia	(Declaration of Media Atom)
	M	ledia Header Atom	mdhd	Specify Time Information Unit
	Н	andler Reference Atom	hdlr	Store component_subtype="m2ps" Showing Identity as MPEG2-PS
	М	ledia Information Atom	minf	(Declaration of Media Information Atom)
		Base Media Header Atom	gmhd	Show Identity as Neither Video Frame nor Audio Frame
		Data Information Atom	dinf	(Declaration of Data Information Atom)
		Data Reference Atom	dref	Store Moving Picture Stream File in URL Form
	s	ample Table Atom	stbl	(Declaration of Sample Table Atom)
		Decoding Time to Sample Atom	stts	Store Playback Duration of Each VOBU
		Sample Description Atom	stsd	Show Identity as MPEG2-PS Including MPEG-2 Video and Also Show Specifications of PS Stream
		Sample Size Atom	stsz	Store Size of Each VOBU
		Sample to Chunk Atom	stsc	Store the Number of VOBUs to Make One Chunk When Overall MPEG File is Treated as One Chunk
		Chunk Offset Atom	stco	Store Chunk Offset=0 as MPEG2-PS Starts from Beginning of MPEG File
	User	Data Atom	udta	(Declaration of User Data Atom)
	R	eference Picture Size Atom	rfsz	Store End Location of Top I-Frame of Each VOBU as Offset Value from Top of VOBU

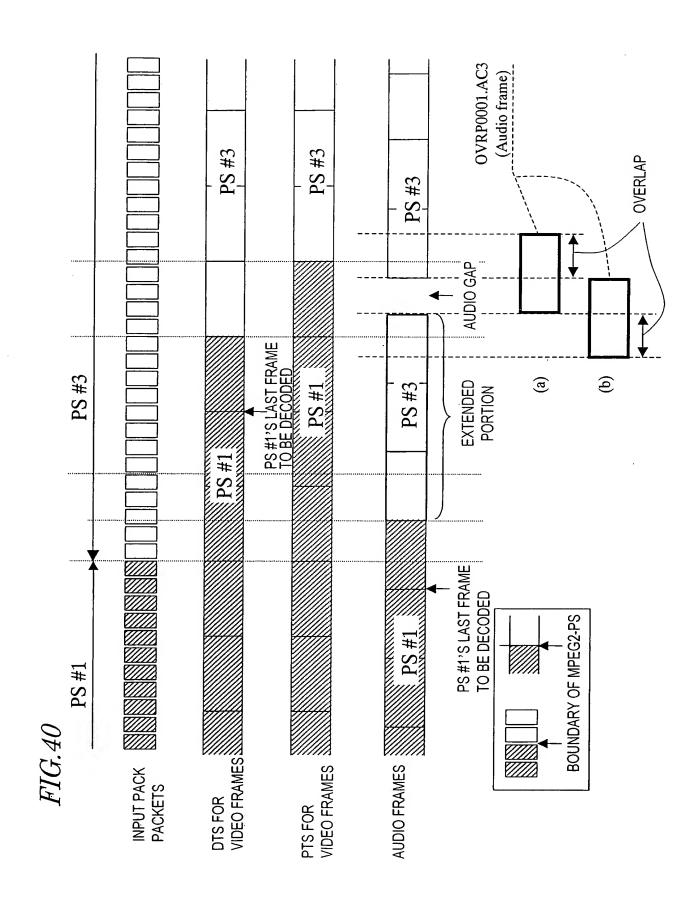
36

#### **AUXILIARY INFORMATION FILE**









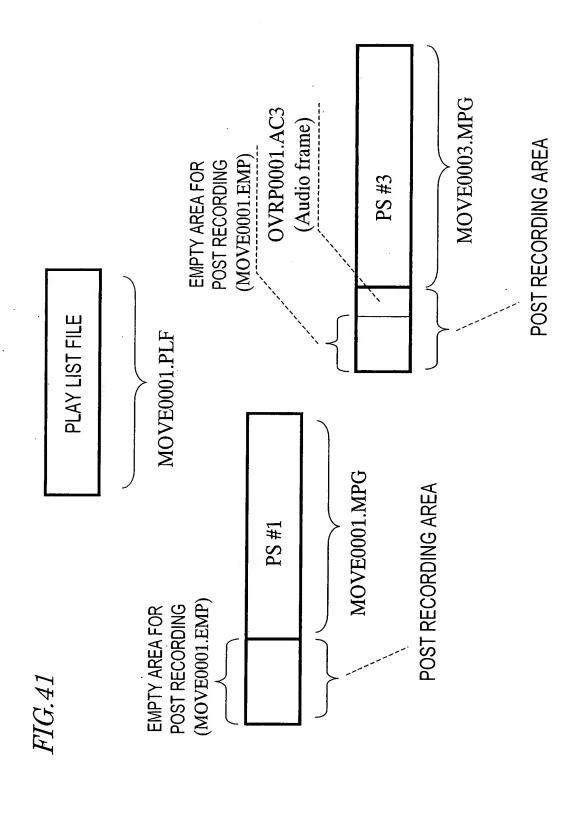
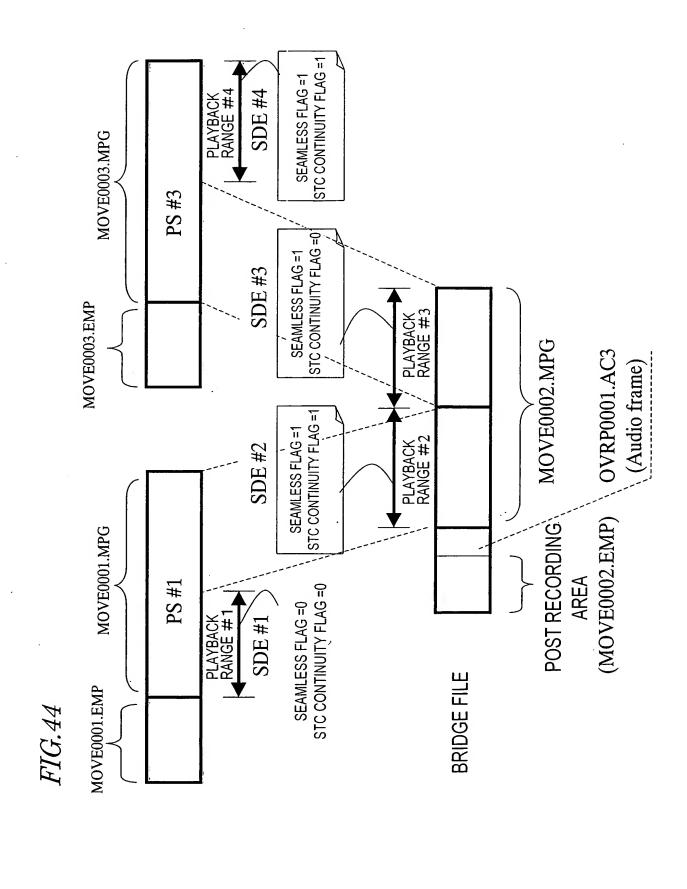
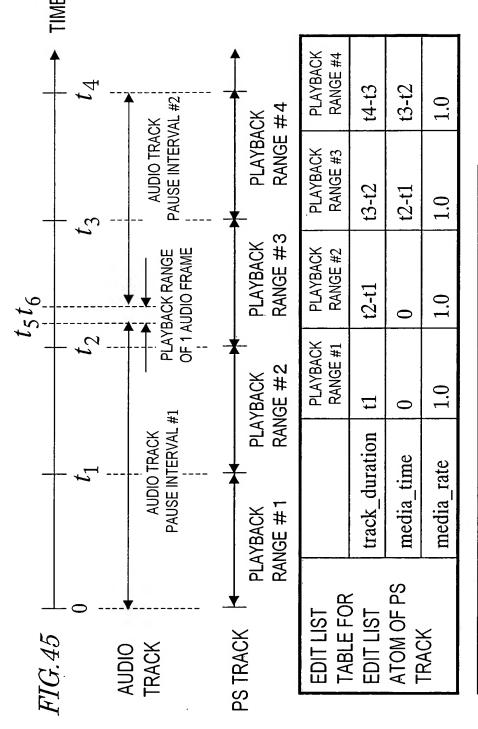


FIG.42

			sample_description_entry 18	itry 18
			field	value
Sample Description Atom 17	Atom 17	_ 1	size	7
field	value		data-format	'p2sm'
size			version	
type	'stsd'		data-refenrece-index	
version			WRITING START DATE AND	MAY 05, 2001,
number_of_entry			TIME	09:23:00
sample		Τ	PRESENTATION START TIME	
description_entry		<del></del>	PRESENTATION END TIME	
			ASPECT INFORMATION	4:3
SEAMLESS INFORMATION	MATION		VIDEO ES ATTRIBUTES	
field			AUDIO ES ATTRIBUTES	
SEAMLESS FLAG		 /	DISCONTINUITY POINT	
AUDIO DISCONTINUITY INFORMATION		,	START FLAG	
SCR DISCONTINUITY INFORMATION		``	SEAMLESS INFORMATION	
STC CONTINUITY FLAG				
AUDIO CONTROL INFORMATION		`		

	Field SEAMLESS INFORMATION SEAMLESS FLAG AUDIO DISCONTINUITY INFORMATION STC CONTINUITY FLAG AUDIO CONTROL INFORMATION	
DITIONS NOT DITIONS	STC VALUE] VALUE] SP HAVE SS PS HAVE NOR FADES IN FADES IN FADES IN D FADES IN	
VALUE MEANING  O SEAMLESS CONDITIONS NOT  1 SEAMLESS CONDITIONS  1 SEAMLESS CONDITIONS	WITH OR WITHOUT AUDIO GAP  AUDIO GAP START TIMING [STC VALUE]  AUDIO GAP INTERVAL [STC VALUE]  AUDIO GAP INTERVAL [STC VALUE]  LAST SCR VALUE OF MEXT PS  FIRST SCR VALUE OF NEXT PS  O PREVIOUS AND NEXT PS HAVE  DISCONTINUOUS STCS  O NEITHER FADES OUT NOR FADES IN  O NEITHER FADES OUT BUT FADES IN  10 FADES OUT BUT FADES IN  11 BOTH FADES OUT AND FADES IN	
FIG.43		





EDIT LIST		PAUSE PLAYBACK	PLAYBACK	PAUSE
TABLE FOR		111   C  1 1 1 T	101101	7# 75/17   11
EDIT LIST	track_duration   t5		t6-t5   t4-t6	14-16
ATOM OF	media_time	-1	0	-1
AUDIO IRACK	media_rate	1.0	1.0	1.0

FIG. 46

									ALIDIO SFAMI ESS INFORMATIO	field	OVERLAP LOCATION	(FRONT OR REAR)	OVERLAP PERIOD
									AUDIO	fic	0	<u>H</u>	<u> </u>
on_entry	value					'ac-3'	1						
sample_description_entry	field	size	type	version	flags	data-format	version	vendor	number_of_channels	sample_size	:	AUDIO SEAMLESS INFORMATION	
													<del></del> 1
		\tom\	value		'stsd'	-	T						
		Sample Description Atom	field	size	type	version	number_of_entry	sample_	description_entry				